

Intrafamilial medically assisted reproduction

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Intrafamilial medically assisted reproduction†

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ABSTRACT: For different motives, couples in need of third party assisted reproduction sometimes prefer the help of a family member over an unrelated collaborator. Quantitative (frequency) and qualitative (experience) data about this practice are lacking or scarce. Forms of intra-familial medically assisted reproduction (IMAR) are different with respect to (i) familial closeness between the collaborator and the person whose reproductive contribution he or she replaces and whether assistance would be intra- or intergenerational, (ii) the relationship between the collaborator and the fertile partner (this relationship may or may not be consanguineous) and (iii) with regard to the material (sperm and oocytes) that is donated and the services (surrogacy) that are offered. This document aims at providing guidance to the professional handling of requests for IMAR. It briefly sketches the background of this practice and discusses a variety of relevant normative aspects.

Key words: assisted reproduction / third party collaboration / consanguinity / psychology / ethics

Introduction

Medically assisted reproduction using third parties ('collaborative' reproduction) is widely accepted in many countries. While collaborative reproduction mostly involves individuals unknown by the recipients, some couples prefer the use of a known third party. This party may be either unrelated (e.g. a friend) or related (a family member). This latter strategy, termed intrafamilial medically assisted reproduction (IMAR), raises various ethical issues and is especially controversial. This paper aims to elucidate these issues and to provide guidance to the professional handling of requests for IMAR.

Background and facts

There is, maybe surprisingly, a lack of information regarding IMAR. Data about its frequency, background and practical implications are scarce. The available evidence, however, strongly suggests that IMAR is relatively rare, although some types of IMAR may be more common in some countries and subcultures. One may distinguish various types of IMAR. A first distinction regards the degrees of familial closeness, between the collaborator and the person who will be helped in the IMAR procedure. In terms of the genetic classification, their relation may be first degree (brother, sister, parent, child), second degree (aunt, uncle, niece, nephew) or third degree

(cousins). This distinction also applies to surrogacy between women of different levels of familial closeness. Furthermore, the collaboration (providing donor gametes, a surrogate uterus or both) may be either intragenerational (involving members of the same generation) or intergenerational (involving members of different generations).

A second distinction (not applying to partial surrogacy) regards the nature of the relationship between the donor and the fertile person, the one whose gametes will be mixed with those of the donor. This relationship may or may not be consanguineous. Consanguinity is defined as reproduction using the gametes of individuals who are closely related genetically. In the large majority of IMAR cases, there is no consanguinity involved. In very rare IMAR cases, gametes from genetically closely related persons may be mixed. Although some such cases have been reported, none of these involved IMAR between relatives closer related than third-degree relatives (cousins). According to the task force (TF), consanguineous cases of IMAR between first- and second-degree relatives are highly unlikely to occur in practice. As will be discussed later in this document, cases of consanguineous IMAR may also be regarded as incestuous, even though no coitus takes place. Likewise, although partial surrogacy as such is never consanguineous (see below), the use of a family member as a partial surrogate (e.g. a sister carrying the child of her brother and her sister-in-law) may sometimes be regarded as incestuous.

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In case of consanguinity, there is an increased genetic risk for the health of the future child. The magnitude of the increased risk depends on the degree of consanguinity—the closer the genetic link, the higher the reproductive risk. The general ('population') risk to have a child with a major handicap or disease is ~3%. Reproduction between (first) cousins (third-degree relatives) implies an increased risk of 2–3%. The risk increases to > 10% above the population background if the parents of these cousins are relatives themselves.

A third distinction regards the genetic material that is donated and the services that are offered:

- sperm donation: possible donors include brothers, cousins and the prospective father's father;
- oocyte donation: for instance, sister-to-sister, daughter-to-mother or niece-to-aunt oocyte donation. Sister-to-sister oocyte donation is the most frequent type of oocyte donation in some countries. A variant of oocyte donation is ovarian tissue donation;
- embryo donation; in these, probably very rare, cases, there are two donors involved;
- surrogacy: which has two types, namely genetic (or full) and gestational (or partial). In the former case, the surrogate provides the oocytes and is artificially inseminated, in the latter she does not provide the oocytes but carries the IVF embryo(s) of the applicants. Possible collaborators include a sister, a cousin, the mother and a daughter of one of the prospective parents.

In practice, some forms of IMAR are more easily accepted by centers than others. While many clinics accept sister-to-sister oocyte donation, much fewer clinics accept brother-to-brother sperm donation. Some fertility clinics spontaneously raise the issue of intrafamilial donation when the medical check-up of the patients reveals that they have to use donor gametes.

General principles

Fertility doctors should take into account the relevant regulations in their country when they are confronted with a request to assist in intrafamilial reproduction. Some countries categorically prohibit collaborative reproduction or impose the 'anonymity rule' in the context of collaborative reproduction, meaning that any collaborator should be unknown to the prospective parents. *A fortiori*, IMAR is illegal in these countries. Especially relevant are laws against incest (sexual relations between individuals regarded as too closely related to marry each other) and consanguinity. Underlying concerns regard both the increased genetic risks for the offspring and possible social disruptions and conflicts.

From an ethical point of view, the following principles are of utmost relevance for the evaluation of IMAR:

Respect for autonomy

Respect for reproductive autonomy includes in principle the choice with whom to reproduce. People may have different reasons for asking or accepting the collaboration of a relative in reproduction. One possible reason is that IMAR allows them to preserve a genetic link between the infertile partner and any children thus conceived. Since 'genetic closeness' is a generally accepted reason for investing time and resources into treatment, this reason should carry considerable weight in this context. A second possible reason is the

psychological advantage of knowing where the gametes come from. The recipients need to be able to trust the donor. Thirdly, in some cases, the easy availability of relatives for collaboration in reproduction may play a role as well. After all, this can reduce the waiting time. And finally, in a commercial environment, IMAR may reduce costs as no payment for the gametes or the uterus should be considered. For some applicants, IMAR is *de facto* the only strategy to have children, as the use of an unknown donor or a known unrelated donor may sometimes be a mere theoretical alternative.

Respect for the collaborators' autonomy is important as well. Collaborators may have various motives. The dominant motive seems to be altruism: the wish to help infertile relatives having a child, thereby contributing to these relatives' welfare. The creation of additional progeny by the donors or surrogates is sometimes mentioned as another motive.

A special question for IMAR is to what extent the consent of the candidate collaborator's possible partner should be sought as well. The helping act (the donation or surrogacy) may considerably affect this partner's life. Moreover, in the case of surrogacy, the collaborator's partner may become the legal parent in some countries. What if (s)he does not agree? What if (s)he agrees only conditionally, e.g. on the condition that the future child will not be informed by the prospective parents about its origins, in order to prevent the child coming into touch with the donor and his or her family. The situation becomes even more complex if one acknowledges that similar questions may arise regarding the role and autonomy of the parents and possible children of the collaborator. Still, these issues are not specific for IMAR, as similar questions and possible conflicts may arise in case of non-familial collaboration.

Objections to IMAR include possible psychosocial pressure on the donor or surrogate, thereby undermining his or her autonomy, and possible role confusions with adverse consequences for the persons involved, including the future child. It may be difficult to balance these objections with the weight to be given to the applicant's reproductive autonomy.

Beneficence and non-maleficence

Applicants may greatly benefit from having a baby with the help of a relative. IMAR may provide advantages over the use of non-family collaborators. In some cases, IMAR will be the only realistic option for people to have a child. Some collaborators may consider it to be an advantage to have (additional) offspring themselves by means of IMAR. A possible advantage of IMAR for the child is that the involvement of a relative may facilitate the child's access to information regarding its genetic origins or biological roots and its engagement in contacts with the donor or surrogate mother. Clearly, this presumes that the child is informed about the way it was conceived.

At the same time, however, IMAR carries possible risks for all parties involved. Risks may be psychosocial and medical. The psychosocial risks may regard more than one single party. Focusing, firstly, on possible risks for the recipients or parents-to-be, the proximity of the donor or collaborator increases the opportunities for intrafamilial conflict. Parents may, for instance, feel threatened in their parental role, especially in case of role confusion in the relative. If collaborators participate in IMAR (partly) because they want to have (additional) children themselves, this may carry a substantial risk. In addition, conflicts

may easily arise if people involved have different views regarding (the timing of) the provision of information to the child about its origin. Furthermore, in case of consanguinity the higher genetic risk may create tensions, more in particular if a handicapped child is born. If IMAR causes medical harm to the collaborator, this will have negative repercussions for the recipients as well (guilt feelings, etc.). Finally, cases of IMAR associated with consanguinity or incest may generate negative societal reactions even if these labels are not always correct (some examples of this will be discussed, at the end of part III).

Risks for the donors or surrogates include psychosocial risks related (or similar) to the ones just mentioned. In addition, collaborators may be put under more or less subtle familial pressure to collaborate, even to the point of coercion. Clearly, this may cause grave conflicts, guilt-feelings, stress and emotional disturbances with long-lasting adverse effects. The risk of undue influence is generally considered to be greater with (first-degree) intergenerational collaboration than with intragenerational collaboration. As is known from reports and research regarding surrogacy generally, some surrogates experience psychological problems, at or immediately after, the moment they relinquish the child and there have been exceptional cases where the surrogate wants to keep the child.

Although the medical risks for female collaborators are not specific for intrafamilial collaboration in reproduction, these risks may be significant, both for oocyte donors (risks related to the hormonal stimulation and the oocyte pick-up) and for surrogate mothers (the risks inherent in pregnancy and delivery). Few data so far suggest that although many oocyte donors find the procedure painful, stressful or both, most donors consider it as manageable. The most notable complaint of oocyte donors is about the time inconvenience and the geographical distance they have to travel, but not about the medical or physical aspects of the donation.

Last but not least, risks of IMAR for the (future) child first and foremost regard psychosocial risks of growing up in the unconventional familial environment thus created. Relationships may be confusing for the child. In case of brother-to-brother sperm donation, for example, a social uncle will be the genetic father while the rearing father is actually a genetic uncle. In case of daughter-to-mother oocyte donation, the daughter will be both mother and sister to the child and the mother will be both mother and grandmother. The risk of identity problems of the child may increase in case of role confusion on the part of a collaborator wanting to take up part of the parental responsibilities.

Furthermore, there are increased genetic risks in case of consanguinity. Apart from that, intergenerational gamete donation by aged people may in itself increase these risks, as with an elderly father who donates sperm to his son. These cases illustrate the complexity and interrelatedness of the different types of risk involved: while some experts are concerned that aged men have a relatively high risk of passing abnormalities to their children, some recipients may consider a higher age of the sperm donor to be an advantage from a psychosocial point of view, as the risk of role confusion may be diminished by the donor's limited life expectancy.

The balance of possible benefits and harms outlined above does not seem to rule out the acceptability of IMAR in individual cases and under further conditions. It is sometimes argued that medical doctors should not assist in intrafamilial reproduction if there is a

risk of serious harm, even if this risk is (very) low. This view, however, is too restrictive and at odds with current practice and standards in medically assisted reproduction. It is the professional's responsibility to evaluate each request for IMAR individually. It will be important, however, to specify the conditions for its acceptance.

Justice

Two considerations are relevant from a justice perspective. First, according to the principle of formal justice, similar cases should be treated similarly. If one accepts sister-to-sister oocyte donation, for example, it would be arbitrary not to accept brother-to-brother sperm donation—unless there is a clear, morally relevant, difference between these types of IMAR. Second, intrafamilial collaboration may facilitate equal access to medically assisted reproduction as it may avoid the high financial costs involved in oocyte donation and/or the shortage of gamete donors in some countries. In so-far-as IMAR circumvents unjust exclusion and enables people to effectuate their right to reproductive health care, including fertility treatment, it may be valued in a positive way, at least in principle. At the same time, it would be problematic if people feel forced to engage in IMAR because a (possibly preferred) non-related donor is too expensive.

Specific considerations

Safeguarding informed choice

It is of paramount importance to safeguard informed consent of both the recipients and the candidate collaborator. Informed consent requires the provision of adequate information on, and discussion of, all relevant aspects, more in particular the uncertainties and possible risks.

Informed consent requires voluntariness as well. It has been argued that as relatives will be influenced by the infertile couple longing for a child, their participation in IMAR cannot be voluntary. This critique regards intergenerational collaboration in particular; this context may generate especially strong pressures to participate. The view that participation cannot be voluntary is, however, problematic, as it presumes an untenable concept of autonomy. As social creatures, human beings are always influenced by others. This will often be even more so when people are confronted with relatives' health needs and suffering. What matters, then, is whether candidate collaborators are under undue influence; i.e. whether they are still able to truly identify themselves with the decisions they make. The fact that a relative may feel morally obliged to help, should in itself not be seen as indicating a less than autonomous choice. The analogy with intra- and intergenerational living organ donation may be helpful here: if one accepts that relatives may voluntarily donate tissue or (part of) an organ, it would be inconsistent not to come to the same conclusion with regard to IMAR.

Still, intergenerational collaboration in reproduction, when compared with intragenerational collaboration, may be especially challenging in view of possible threats to voluntariness. After all, in this situation and especially so where first-degree relations are concerned, possible collaborators may be dependent. A distinction should be made here between parent-to-child donation and child-to-parent donations. The dependency is mainly a concern for the latter while

in the parent-to-child donations, a feeling of guilt or responsibility for the child's fertility problems and a wish to repair may play a role. At the same time, one should avoid a simplistic dichotomy between presumably 'risk-free' intragenerational and risky intergenerational collaboration. After all, the difference between these scenarios in terms of possible threats to voluntariness is only gradual. Furthermore, in individual cases, intragenerational collaboration (including the widely accepted practice of sister-to-sister oocyte donation) may involve a larger danger of undue inducement than intergenerational collaboration (e.g. niece-to-aunt oocyte donation). Although intra-generational collaboration may be morally preferable in general, a case-by-case approach regarding both intra- and intergenerational collaboration is important.

There is a strong, if not universal, consensus that medical professionals should never accept a minor relative as gamete donor or surrogate; minors are considered not to be competent to realize what it means to have offspring, let alone to engage in IMAR. Although the age of majority is a necessary condition, it should be supplemented by the competence or capacity of the (adult) candidate collaborator, as this is a condition of autonomy. In case of doubt regarding the candidate's competence, professionals should request expert advice or reject the candidate. Well-considered decision-making may also be facilitated if the collaborator has at least one child. In the case of intended surrogacy, the TF considers parenthood to be a precondition (TF Opinion no.10: Surrogacy).

Counseling

Both combined and separate counseling of recipients and collaborator is crucially important, as this may facilitate well-considered decision making and contribute to self-selection, thereby reducing psychosocial risks. Points to consider in the counseling process include:

- the voluntariness of the collaboration;
- the need for emotional support for all parties involved;
- the roles of the parties and their mutual expectations. It will be important to acknowledge that collaboration is a gift relationship, not a strategy for the donor or surrogate to have (additional) children or to ensure having a grand child by means of e.g. father-to-son donation. In this connection, it is very important also to discuss the scope and limitations of the different roles of the parties in relation to the actual construction of parenthood;
- the possibility of future tensions between recipients and collaborator and strategies for handling these;
- the possibility of negative societal reactions, especially in cases of intrafamilial reproduction resembling incest (see below), and strategies for coping with these;
- the implications of IMAR for 'relevant others' (parents of the collaborator, etc.), also as a source of possible (emotional) problems, and ways to handle these;
- and, last but not least, the issue of whether (and if so, how, when and in how far) the child should be informed about the method of its conception and about the identity of the donor?

In the last decades, there has been an international debate about the moral pros and cons of (not) informing children conceived by gametes of—mostly unknown—donors about the method of conception and, in addition, allowing them to acquire knowledge of the identity of the

donor. Do these children have a moral right to be informed? An affirmative answer lies at the basis of the regulation of gamete donation in a growing number of countries, though the normative basis is still contested. A principled, deontological argument in favor of disclosure is that the child has a right to know its biological origins, more in particular a right to know the identity of its genetic parents. A consequentialist argument in favor of disclosure of the method of conception is that there is a (small) risk that the child will find out about the truth anyway, for example in the context of a marital crisis or, accidentally, through genetic testing. Accidental disclosure or disclosure in the context of a crisis may be especially harmful for the child. A relevant factor in this regard is possible knowledge among other family members; the more relatives are informed about the method of conception, the higher this risk will become. At the same time, however, parents may use a consequentialist argument against disclosure, especially in the context of IMAR, where the child may frequently meet the relative who was involved, namely that openness may generate confusion in the child. The TF unanimously endorses the following view: if other relatives are aware of familial collaboration, counselors should counsel applicants of IMAR in favor of disclosure and discourage IMAR if applicants are not willing to opt for disclosure. In other situations, taking into account the different arguments for and against disclosure, various strategies may be equally justified: while some would give priority to the child's right to know, and argue in favor of motivating applicants to openness, others would be more concerned about the risk of confusion, and accept a parental preference for secrecy.

It is important that the counselor informs the applicants about the best strategy to tell the future child (the timing, wording, etc.) and that (s)he offers professional support.

Some applicants may, on further consideration, prefer the use of an unknown donor. A variant of this strategy is 'cross donation', sometimes termed known-anonymous donation. This refers to applicants recruiting a known donor (this might be a relative) whose gametes are donated to another (unknown) recipient couple, who in return provide the gametes for the first couple.

Although the availability of different counselors for each of the different parties involved might be ideal, this precautionary strategy seems to be neither necessary, nor realistic in practice. Expert counselors should be able to provide adequate counseling to both parties.

In rare cases, applicants may not want to discuss the relevant risks. This situation confronts the medical doctor and the counselor with difficult questions. Some commentators may repudiate the imposition of unwanted information as unjustified paternalism, at odds with respect for autonomy. It is important to see, however, that the provision of adequate information is also a means to risk reduction—which is a relevant consideration in view of the doctor's responsibility to take into account the welfare of the child.

Another question is whether the team may take the initiative to propose IMAR in cases where this might be possible. Merely mentioning the possibility would be a matter of presenting all options to the patient. Whereas this may be acceptable, an exception should perhaps be made with regard to the first-degree intergenerational variant of IMAR. Moreover, one should be careful to avoid the pitfall of presenting the use of a relative as the evident or easiest solution. In addition, collaboration in such a project should not be presented as a moral duty among relatives (an example of directive

counseling). This point relates to the more general question as to whether—and if so, when—people have a moral obligation to help others who are in need. Arguments in favor of a duty to engage in IMAR are that infertility may cause grave suffering and that relatives may be in a unique position to help. An additional condition for being morally obliged to help is that the (material and immaterial) costs for the relative are low. In view of the intricacies of, and possible emotional problems involved, in IMAR, reasonable people may disagree on the question as to whether relatives have a moral duty to collaborate. As a consequence, directive counseling towards asking a relative is problematic.

It is the responsibility of the candidate collaborator to discuss intended collaboration with 'relevant others', especially the possible partner, and to solicit their consent/approval. The treating fertility doctor should check whether this discussion has taken place, and consent has been obtained, also in view of his or her responsibility for the welfare of the child. The implication is that the partner should be invited to participate in (pretreatment) counseling.

Risk reduction

The risks of IMAR, although real, do not seem to be *a priori* prohibitive. If professionals may decide to engage in IMAR, the following measures are important to help them minimize risks:

First, offer adequate counseling, as this may contribute to self-selection of applicants and/or donors, thereby reducing psychosocial risks. Second, in order to protect collaborators from medical harm, doctors should stick to safe protocols as used in regular medically assisted reproduction. Standard protective measures like screening for infectious diseases should be followed. With regard to age limits, however, it would be justified to be more permissive. Assuming that the applicants do not have an acceptable alternative, it is justified to allow somewhat older oocyte and sperm donors if the recipients are well-informed about the possible implications and still insist. Clearly, a flexible policy has its limits, given that the use of oocyte donors aged 40 years and older may substantially decrease the success rate of fertility treatments. These may, then, become disproportional or even futile. With regard to relatively older women offering to be a surrogate for a daughter or a niece, the age-related increased pregnancy risks justify setting a similar limit as used for IVF with donor oocytes.

Finally, in cases of IMAR involving consanguinity between third-degree genetic relatives (the only form of consanguineous IMAR that the TF regards as realistic), specialized genetic counseling is appropriate in view of the increased risk of conceiving a child affected with a serious recessive disease. This is not different from the situation where consanguineous partners in a cousin-marriage or—relationship are counseled about their reproductive risk. Taking into account both the family history and possible increased genetic risks for autosomal recessive conditions among members of the particular ethnic group (Caucasians, etc.), the counselor should provide the applicants and the intended collaborator with adequate information. Part of adequate genetic counseling and good clinical practice is offering carrier screening for those disorders that are more prevalent in the particular ethnic group. For example, Caucasians should be offered carrier screening for cystic fibrosis, people from particular Mediterranean countries for hemoglobinopathies and people with a Jewish ancestry for Tay

Sachs disease. If both the applicant whose gametes will be used and the intended collaborator carry the same disease, there is a known risk of 25% of conceiving a child affected with the particular condition. Although preimplantation genetic diagnosis (PGD) might be offered as a way of avoiding this reproductive risk, this should not be done without discussing first how the need for an additional invasive technique might affect the reasons for preferring IMAR over non-related donation.

The accepted justification of carrier screening is to enable prospective parents to make informed reproductive decisions. According to the widely accepted normative framework for counseling and testing in reproduction, the central ethical principle is respect for reproductive autonomy. This is made operational by underscoring the importance of both the prerequisite of voluntariness (as part of informed consent) and the ideal of non-directive counseling, which implies that doctors should support prospective parents at high risk, whatever reproductive option they prefer. This accepted ethical guidance for genetic counseling and testing is, however, not necessarily helpful in the context of medically assisted reproduction, in general—and IMAR involving consanguineous applicants, in particular. Doctors involved in medically assisted reproduction have the professional responsibility to take account of the welfare of the possible future child and to refrain from medically assisted reproduction in case of a high risk of serious harm to the child (TF Opinion no.13: The welfare of the child). In view of this, it may be morally justified to offer genetic testing to applicants at risk of having an affected child as a condition for access to medically assisted reproduction (a so-called 'coercive' offer). The real issue is not whether it is morally acceptable to coercively offer carrier screening and, possibly, PGD to applicants at risk, but when.

In the current context of consanguineous IMAR, two types of decisions should be distinguished. First, would it be acceptable to coercively offer carrier screening for one or more disorders prevalent in the ethnic group? No doubt, in most if not all cases, the risk will be high enough to justify the offer of carrier screening—but a coercive offer would be acceptable only in case of high risks. It is debatable whether this is the case when cousins want to engage in IMAR. If the parents of the consanguineous applicants are relatives themselves, the genetic risk of conceiving an affected child may be substantially higher. As a consequence, a coercive offer of genetic testing for the particular risk factor(s) would be justified in these cases.

Second, if both the applicant who provides his/her own gametes and the intended collaborator are found to carry a mutation for the same disease, a new situation emerges, in view of the high reproductive risk (25%). No doubt, many applicants would then be willing to either opt for a non-related donor (abandoning the idea of IMAR) or make use of PGD. Should a couple insist on IMAR but refuse the latter option, the professional would be justified, if not morally obliged, to withhold access to medically assisted reproduction in view of his or her responsibility to avoid a high risk of serious harm.

Applications which give the appearance of consanguinity or incest

In most countries, laws and regulations forbidding consanguinity and incest apply to sex, marriage and reproduction between closer than third-degree (genetic) relatives. As these laws and regulations were

written before the era of assisted reproduction and may therefore not explicitly rule out non-coital forms of reproduction between such relatives, the question might arise whether first- and second-degree consanguineous IMAR are to be regarded as acceptable in those jurisdictions. The answer to this is that although perhaps not in violation of the letter of relevant regulations, such forms of IMAR do run against their spirit. In general, medical professionals should not offer IMAR when this is at odds with (the spirit of) anti-incest or anti-consanguinity laws in their country. However, as consanguineous IMAR is highly unlikely to involve relatives more closely related genetically than first cousins (third-degree), this seems quite theoretical.

But this is not where the debate ends. Consider the following cases:

- (1) an adult daughter donates oocytes to her mother, whose new partner's sperm will be used to conceive the child;
- (2) a woman intends to engage in full surrogacy to help her brother and his wife to have a child, meaning that she will carry her brother's child but without using her own oocytes;
- (3) a lesbian woman wants to have a child by receiving (an) IVF-embryo(s) created with sperm of her brother and oocytes of her partner.

These cases, although involving reproduction between genetically unrelated persons, may give the impression of first-degree consanguinity and incest, and may therefore be regarded as unacceptable. The question is whether these concerns are valid. On a closer look, there really is only a semblance of consanguinity in all cases as no gametes of genetically related persons are used. This means that from the point of view of consanguinity prohibitions, these cases are not problematic. But what about incest? Some may find that all three are still sufficiently incest-like to be rejected. This seems to lead us back to the appeal to the 'spirit' of the relevant prohibition. But the further this appeal is stretched to cover situations with different characteristics than those clearly falling under the prohibition of incest, the less obvious it becomes that IMAR in those situations would indeed be unjustified. As there is no sex between close relatives, nor first- or second-degree consanguinity, what further problem is brought to the fore by calling these cases incest-like?

In the first case, it is clear what this charge refers to: reproduction taking place within a parent–child relationship (either biological or social) is at odds with the very nature and function of such relationships. But in fact, this is not what happens here. The adult daughter has no parent–child relationship with her mother's new partner. Had this been the situation, the first case would indeed have been morally unacceptable. In its present form, however, it is difficult to see why the arrangement described in this case would be more problematic than other instances of intergenerational IMAR. With regard to the other two cases, even if there is no coitus and no mixing of gametes, what makes them incest-like is presumably that gametes and reproductive functions of closely related relatives (the sperm of a brother and the uterus of a sister) are brought together with the

aim of producing a child. Here again, the question is why this would be morally problematic.

For all three cases, the answer to this question cannot be that these instances of IMAR simply 'don't feel good', as that would be the expression of a gut feeling rather than a moral argument. A conceivable argument is that even if these cases are not problematic in themselves, they may provoke negative reactions from other relatives and society, which may have adverse consequences for the welfare of the child. But this either too easily presumes that these cases involve a high risk of serious harm or wrongly presumes a more rigid, problematic standard, according to which professionals should not assist in reproduction if there is even a small risk for the child. The argument is also at odds with the wide acceptance of, for example, assisted reproduction in lesbian couples. After all, children raised by these couples may likewise suffer from negative societal reactions—but this argument has not stood in the way of growing support for helping these couples to have children.

To conclude: first- or second-degree consanguineous IMAR would be at odds with the spirit of laws and regulations forbidding consanguinity and incest and should therefore be rejected. However, such cases are highly unlikely to be proposed in practice. IMAR involving the mere semblance of first- or second-degree consanguinity may still raise concerns about incest. However, without further arguments establishing that these concerns refer to serious moral objections, providing assistance to such arrangements may well be justified.

Recommendations

- IMAR is a morally acceptable practice in some situations and on some conditions.
- Both combined and separate counseling of recipients and collaborators are crucial as this may contribute to both well-considered decision making and risk reduction.
- IMAR should be withheld in case of undue pressures on the collaborators or a high risk of serious harm for the possible child.
- There are no *a priori* moral objections to intergenerational IMAR. First-degree intergenerational collaborations need special scrutiny in view of the increased risk of undermining autonomous choice.
- Cases of IMAR involving third-degree consanguinity, though acceptable in principle, call for additional counseling and risk-reduction.
- Although there should be no room for first- or second-degree consanguineous IMAR, cases involving only a semblance of such arrangements may also be acceptable.
- More research into the psychosocial implications of IMAR is of paramount importance. The findings of such research may well contribute to more adequate moral guidance.
- Practitioners who refuse to collaborate in demands for IMAR should refer the patients to another centre for consideration.